

DEFINITIVE RULES FOR NOMENCLATURE OF ORGANIC CHEMISTRY

IUPAC 1957 Rules.

Section A. Hydrocarbons

Section B. Fundamental Heterocyclic Systems

These rules are taken from 'Definitive Rules for the Nomenclature of Organic Chemistry' which were adopted unanimously by the Commission on Nomenclature and by The Council of the International Union of Pure and Applied Chemistry at Paris 1957, and subsequently published by Butterworths Scientific Publications on behalf of the Union. The extracts are printed here by permission of the Union and of Butterworths Scientific Publications. Future 'tentative' rules will be published in the Bulletin of the Union, and when made 'definitive' in its Journal 'Pure and Applied Chemistry.'

RULES

A. HYDROCARBONS

Acyclic Hydrocarbons

A-1

1.1.—The first four saturated unbranched acyclic hydrocarbons are called methane, ethane, propane and butane. Names of the higher members of this series consist of a numerical prefix and the termination "-ane." Examples of these numerical prefixes are shown in the table below. The generic name of saturated acyclic hydrocarbons (branched or unbranched) is "alkane."

Examples:

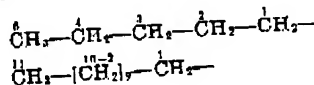
n	n	n	n
1 Methane	12 Dodecane	22 Docosane	32 Dotriacontane
2 Ethane	13 Tridecane	23 Tricosane	33 Trtriacontane
3 Propane	14 Tetradecane	24 Tetracosane	40 Tetracontane
4 Butane	15 Pentadecane	25 Pentacosane	50 Pentacontane
5 Pentane	16 Hexadecane	26 Hexacosane	60 Hexacontane
6 Hexane	17 Heptadecane	27 Heptacosane	70 Heptacontane
7 Heptane	18 Octadecane	28 Octacosane	80 Octacontane
8 Octane	19 Nonadecane	29 Nonacosane	90 Nonacontane
9 Nonane	20 Eicosane	30 Triacontane	100 Hectane
10 Decane	21 Heneicosane	31 Hentriacontane	132 Dotriacontahectane
11 Undecane			

1.2.—Univalent radicals derived from saturated unbranched acyclic hydrocarbons by removal of hydrogen from a terminal carbon atom are named by replacing the ending "-ane" of the name of the hydrocarbon by "-yl." The carbon atom with the free valence is numbered as 1. As a class, these radicals are called normal, or unbranched-chain, alkyls.

Examples:

Pentyl

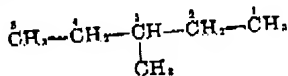
Undecyl



A-2

2.1.—A saturated branched acyclic hydrocarbon is named by prefixing the designations of the side chains to the name of the longest chain present in the formula.

Example:



3-Methylpentane

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C-1

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